



No.	Author	Date
	Title	
1020	Steven E. Backs, Wildlife Research Biologist 2011 Spring Wild Turkey Gobbling Counts.	5/6/11

Abstract: The mean number of wild turkeys heard along 10 roadside counts during March 28 through 22 April 2011 was 0.74 gobblers heard per stop, a 4% increase compared to the gobbling index of 0.71 in 2010. The long-term trend, based on a 5-yr moving average, shows a general increase from 1987-2006, followed by a general decrease since the 2006 peak. The 4% increase was not significantly different ($P > 0.05$) from the previous 5-yr mean of 0.90 gobblers heard per stop.

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Gobbler counts are conducted annually during late March to April to determine the relative population trends of wild turkeys in the areas surveyed. In 2011, 10 traditional areas were surveyed in portions of 14 counties. Roadside gobbler trend routes were conducted in conjunction with roadside trend routes for drumming male ruffed grouse. Each route has 15 predetermined listening stops along 10-20 miles of rural roadways. Routes are conducted at least twice, in opposite directions, and the highest gobbler count is used for determining the gobbling index. The average number of gobblers heard on 10 roadside trend routes in 2011 ranged from 0.07 to 1.20 gobblers heard per stop (**Table 1**). Overall, an average of 0.74 gobblers were heard per stop in 2011 which was 4% more than the number heard in 2010.

While roadside routes are not accurate indicators of annual trends in wild turkey populations, they provide some long-term (≥ 5 yrs) trends and provide information to compare areas relative to each other (**Table 2**). Weather conditions during the survey period can contribute to the variability of annual trends. Annual variations may also reflect the proportion of vocal 2-year-old gobblers in the population rather than actual population trends over the long term. The substantial increase in the 2006 gobbling index is a prime example of where the record high summer brood production in 2004 (Backs 2006) became quite evident with a large cohort of very vocal 2-yr-old gobblers (**Figure 1**). The slight depression in the gobbling indices since the 2006 peak probably reflects the low summer brood production of 2005-2010. The 4% decrease in the gobbling index in 2011 was not significantly different ($P > 0.05$) from the previous 5-yr mean of 0.90 gobblers heard/stop (2005-2010).

The 25 survey years represent a period of time when most turkey populations were undergoing steady growth but are now reaching population maintenance levels. Gobbling count indices will now begin to fluctuating above/below a lower, long-term mean unless changing habitat conditions or harvest strategies influence population trends.

Literature Cited

Backs, S. E. 2006. Wild turkey brood production – Summer 2005. Wildlife Management and Research Note No. 910. Indiana Division of Fish and Wildlife, Indianapolis. 5pp.

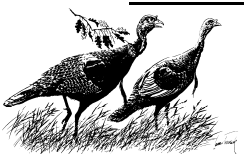


Table 1. Wild turkeys heard on roadside counts in Indiana between 28 March to 22 April 2011.

County/Area	No. of Routes/ Stops	No. of Repetitions (for/rev)	Total Turkeys Heard	Total Seen	Highest Number Heard/Rt.	Turkeys Heard ^{1/} Per Stop	
						2011	2010
Jackson, Brown, Monroe (Hickory Ridge, USFS)	1/15	3	35	3	18	1.20	0.80
Owen-Putnam	1/15	3	10	7	5	0.33	0.67
Perry Co. (Oriole-St.Croix-USFS)	1/15	2	13	0	8	0.53	0.53
Washington State Forest	1/15	2	19	0	10	0.67	0.47
Lawrence & Orange (Lost River - E, USFS)	1/15	2	15	0	8	0.53	0.40
Martin & Orange (Lost River - W, USFS)	1/15	2	39	0	20	1.33	0.93
Morgan-Monroe State Forest Greene	1/15	2	21	0	12	0.80	0.73
	1/15	2	1	0	1	0.07	0.20
Orange (Little Fork, USFS)	1/15	2	22	1	13	0.87	1.27
Jefferson	1/15	2	28	2	16	1.07	1.07
Means						0.74	0.71

^{1/} Indices calculated using route with highest count.

Table 2. Wild turkey roadside gobbling counts during April in Indiana from 1987 to 2011.

Year	Gobblers Heard Per Stop *										
	HICKORY	OWPUT	PERRY	WASH	LR-EAST	LR-WEST	MORGAN	GREENE	LICKCR	JEFFERSON	SE
1987	1.10	0.07	0.00	0.20	0.53	NR	0.27	0.00	0.00	1.00	0.35
1988	0.73	0.13	0.13	0.00	0.47	NR	0.20	0.07	0.00	1.13	0.32
1989	1.13	0.00	0.21	0.00	0.87	NR	0.20	0.00	0.47	0.73	0.40
1990	0.80	0.13	0.20	0.00	1.00	1.27	0.27	0.07	0.73	0.53	0.50
1991	0.33	0.20	0.40	0.00	0.87	0.53	0.33	0.07	0.87	1.07	0.47
1992	0.73	0.07	0.20	0.00	0.80	1.87	0.00	0.07	0.67	0.53	0.49
1993	0.47	0.00	0.47	0.00	0.27	0.53	0.07	0.20	0.47	1.20	0.37
1994	0.53	0.13	0.47	0.00	0.73	0.27	0.13	0.27	0.80	0.80	0.41
1995	0.67	0.00	0.80	0.00	0.93	0.73	0.00	0.13	0.80	1.53	0.56
1996	1.13	0.33	0.80	0.07	0.60	1.47	0.27	0.13	0.53	0.80	0.61
1997	0.67	0.20	0.87	0.07	0.73	0.47	0.47	0.00	0.60	0.93	0.50
1998	1.40	0.27	0.47	0.40	0.60	0.53	0.33	0.67	0.27	0.80	0.57
1999	0.80	0.60	0.47	0.27	1.27	0.53	0.67	0.40	0.87	1.20	0.71
2000	0.60	0.20	0.53	0.67	1.27	0.47	0.27	0.67	1.20	1.33	0.72
2001	0.73	0.53	0.60	0.60	0.67	0.73	0.33	0.33	0.93	1.73	0.72
2002	0.33	0.60	0.53	0.80	1.27	0.93	0.53	0.20	1.13	1.33	0.77
2003	0.53	0.20	0.60	1.47	1.07	0.67	0.80	0.60	1.00	2.13	0.91
2004	0.80	0.20	1.07	1.33	0.87	0.73	1.33	0.60	1.00	1.87	0.98
2005	0.93	0.27	0.87	1.20	1.07	1.47	0.33	0.60	0.80	1.47	0.90
2006	2.67	0.60	0.93	0.73	1.60	2.27	0.53	1.53	1.47	2.20	1.45
2007	1.07	0.20	1.00	0.80	0.60	1.07	0.73	0.27	0.73	1.53	0.80
2008	2.33	0.33	0.67	0.40	0.53	0.67	0.67	0.07	0.67	1.20	0.75
2009	2.13	0.33	0.60	0.27	0.53	1.20	0.80	0.20	1.20	0.60	0.79
2010	0.80	0.67	0.53	0.47	0.40	0.93	0.73	0.20	1.27	1.07	0.71
Cumm. Mean	0.98	0.26	0.56	0.41	0.81	0.92	0.43	0.31	0.77	1.20	0.66
5 Yr Mean	1.80	0.43	0.75	0.53	0.73	1.23	0.69	0.45	1.07	1.32	0.90
2011	1.20	0.33	0.53	0.67	0.53	1.33	0.80	0.07	0.87	1.07	0.74

* = Indices calculated using route with highest count.

HICKORY = Hickory Ridge (USFS), Lawrence and Jackson Counties

OWPUT = General area of Owen-Putnam St. Forest

PERRY = northern portion of Perry Co.(USFS)

WASH = general area of Jackson-Washington St. Forest in Washington County

LR-EAST = Lost River Unit - East, USFS, Lawrence and Orange Counties.

YEAR MEAN = Arithmetic average value for all routes for a respective year (row).

SE = standard error of annual (row) mean

Cumm. Mean = Cumulative mean for a particular route.

5 Yr Mean = mean for 5 years previous to survey year.

MORGAN = general area of Morgan-Monore St. Forest in Morgan county.

GREENE = eastern Greene County

LICKCR = Lick Creek Area, USFS, in Orange County.

JEFFERSON = Jefferson County

LR-WEST = Lost River Unit - West, USFS, Orange and Martin Counties.

Figure 1. Roadside Gobbling Indices

